

Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's First Set of Requests for Production of Documents and Interrogatories to Natural Resources Defense Council, Southern Alliance for Clean Energy, Sierra Club, South Carolina Coastal Conservation League and Upstate Forever

Request for Production:

1-9. On page 8, at paragraph 17, of Exhibit B to James Wilson's direct testimony, it states as follows:

If the flaws I have identified were even partially corrected, the 14.5% summer planning reserve margin that was in place until the 2016 IRP, which would provide a 16.5% winter reserve margin, would be more than adequate.

- a. Please provide all workpapers and analysis conducted to support this reserve margin recommendation.

RESPONSE:

- a. CCL, et al. object to this request because the quoted portion of Mr. Wilson's testimony did not purport to recommend a specific reserve margin.
Notwithstanding said objection, no responsive workpapers exist. With regard to supporting analysis, if the flaws identified in the Wilson Report were corrected, the summer and winter planning reserve margins would be much lower, as explained as follows.

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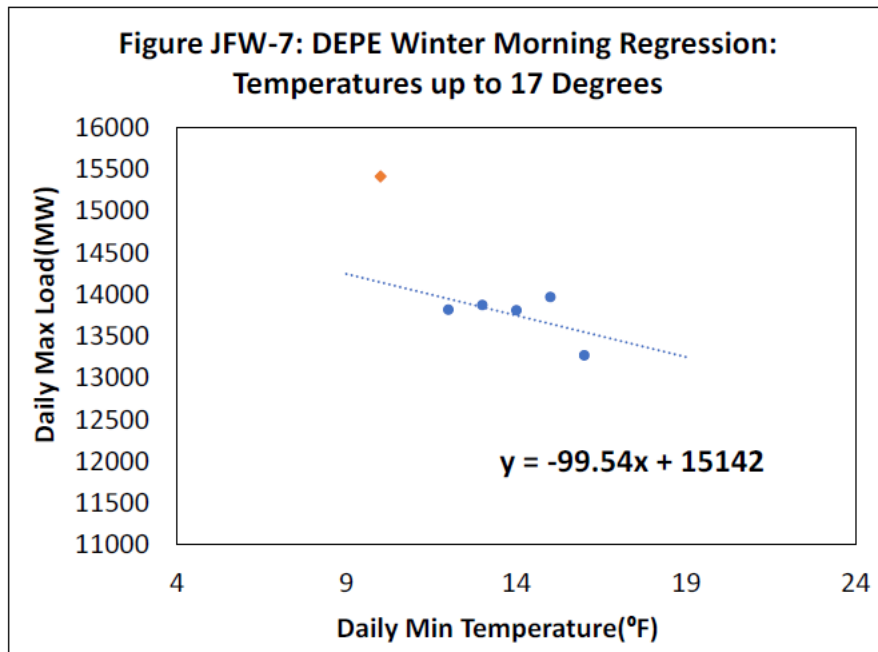
Interrogatory:

1-29. As related to Figures JFW-1 and JFW-2 in Exhibit B to James Wilson's direct testimony, please provide the following:

- b. For the DEP regression in JFW-2, please explain why you consider the 10-11 degree temperature range an outlier.

ANSWER:

- b. An outlier is an observation that lies an abnormal distance from the trend reflected in the other members of the population. Figure JFW-7 is the same as Figure JFW-2, but includes the outlier value, and also extends the trend line of the other observations forward and backward. The outlier lies far above the trend line.



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Interrogatory:

1-31. On page 26, at paragraph 58.c, of Exhibit B to James Wilson's direct testimony, it states as follows:

Third, note that this was a quite unusual date – the outage was very early Tuesday morning following a three-day New Year's weekend. Perhaps if this extreme cold had occurred under more regular circumstances the plant staff could have addressed the cold-related problems that arose without having to take a forced outage during the morning peak period of a day when extremely high loads were expected due to the extreme cold.

- a. Please provide any information or evidence supporting the assertion that holiday periods affect the management of plants especially during cold weather, and describe in detail your reasoning supporting this statement.

ANSWER:

There are many ways the unusual circumstances of this date (the morning following the 3-day New Year's weekend) could have impacted the plant staff's ability to address the circumstances that led to the outage. Many people are traveling on the last day of a holiday weekend, and could be delayed and not get their normal sleep. Perhaps the staffing was different over the holiday weekend than over most weekends, or the usual plant staff were not available on the morning of January 2. Less experienced staff might not be as capable of dealing with the relatively rare problems that can arise under extreme cold.

Duke Energy Carolinas, LLC's and Duke Energy Progress, LLC's First Set of Requests for Production of Documents and Interrogatories to Carolinas Clean Energy Business Association
(Substituted as party of record for South Carolina Solar Business Alliance)

Interrogatory:

1-24. Referring to SBA Witness Olson's testimony discussing his use of the E3 RECAP model to calculate ELCC values for DEC and DEP, please explain, identify and/or provide the following:

...

- c. Provide the LOLE by month for each solar penetration studied in the RECAP Model for DEC and DEP as well as a 12x24 of all LOLE events.
- d. Provide the monthly LOLE results for the analysis provided in Figure 9 in Exhibit AO-2 as well as a 12x24 of all LOLE events.
- e. Provide the RECAP solar ELCC calculations by winter and summer season for each solar penetration for both DEP and DEC.
- f. Please provide all EFOR data by season and month used in the RECAP model.
- g. Provide details of imports modeled in RECAP, and explain exactly how this was captured.
- h. Provide details of DR modeling including capacity, and hourly dispatches used.
- i. Identify how many and which weather years were used in the RECAP modeling and explain the reasoning for including the identified weather years.

ANSWER: Without waiving the general objections set forth above, SCSBA responds to this Interrogatory and its subparts as follows:

...

- c. SCSBA objects to this Interrogatory subpart and all subsequent Interrogatories because Duke has exceeded the 50 Interrogatories, including parts and subparts, allowed by Rule 33(b)(9) of the South Carolina Rules of Civil Procedure.
- d. SCSBA objects to this Interrogatory subpart and all subsequent Interrogatories because Duke has exceeded the 50 Interrogatories, including parts and subparts, allowed by Rule 33(b)(9) of the South Carolina Rules of Civil Procedure.
- e. SCSBA objects to this Interrogatory subpart and all subsequent Interrogatories because Duke has exceeded the 50 Interrogatories, including parts and subparts, allowed by Rule 33(b)(9) of the South Carolina Rules of Civil Procedure.
- f. SCSBA objects to this Interrogatory subpart and all subsequent Interrogatories because Duke has exceeded the 50 Interrogatories, including parts and subparts, allowed by

Rule 33(b)(9) of the South Carolina Rules of Civil Procedure.

- g. SCSBA objects to this Interrogatory subpart and all subsequent Interrogatories because Duke has exceeded the 50 Interrogatories, including parts and subparts, allowed by Rule 33(b)(9) of the South Carolina Rules of Civil Procedure.
- h. SCSBA objects to this Interrogatory subpart and all subsequent Interrogatories because Duke has exceeded the 50 Interrogatories, including parts and subparts, allowed by Rule 33(b)(9) of the South Carolina Rules of Civil Procedure.
- i. SCSBA objects to this Interrogatory subpart and all subsequent Interrogatories because Duke has exceeded the 50 Interrogatories, including parts and subparts, allowed by Rule 33(b)(9) of the South Carolina Rules of Civil Procedure.

Interrogatory:

1-25. Referring to SBA Witness Olson's testimony discussing his use of the E3 RECAP model to calculate ELCC values for DEC and DEP, please explain in detail:

- a. Has E3 conducted any benchmarking of the RECAP model to other loss of load probability models? If so, please provide the conclusions of the benchmarking.
- b. How long has the RECAP model been in use?
- c. Who are current users of the RECAP model (other than E3)?
- d. Have RECAP modeling results been accepted by any State Public Service Commissions or Regulatory Authorities? If so, please identify the State Public Service Commissions or Regulatory Authorities and describe the specific applications for which RECAP was used including providing the docket number of the proceeding, if applicable.

ANSWER: SCSBA objects to this Interrogatory and all subsequent Interrogatories because Duke has exceeded the 50 Interrogatories, including parts and subparts, allowed by Rule 33(b)(9) of the South Carolina Rules of Civil Procedure.

Interrogatory:

1-26. Referring to SBA Witness Olson's Exhibit AO-2, p.4, Item 5 states: "Duke's assumption of fixed-tilt solar instead of tracking diminishes the capacity value of solar. Currently, nearly all the utility scale solar being built in the US is tracking solar which has improved ELCCs due to its ability to track the sun," please explain whether you analyzed the validity of this statement for the southeast, specifically North Carolina and South Carolina and provide any analysis, workpapers or other Documents that you relied upon that shows the percentage of fixed versus tracking utility scale solar for the southeast, specifically North Carolina and South Carolina.

ANSWER: SCSBA objects to this Interrogatory and all subsequent Interrogatories because Duke has exceeded the 50 Interrogatories, including parts and subparts, allowed by Rule 33(b)(9) of the South Carolina Rules of Civil Procedure.